CLAIMS

What is claimed is:

1. A system for automatically switching to an interactive application during television commercial breaks comprising:

an interactive application module capable of executing an interactive application program and generating output data;

a television program module that generates a television program signal;

an input module for entering user input commands into the interactive application module;

a break detection module adapted to detect television commercial breaks in the television program signal and generate a break beginning signal;

a display module having a primary display area capable of receiving the television program signal and the interactive application output data and displaying a primary display image corresponding to either the television program signal or the interactive application output data; and

a switching module that switches the primary display image to the interactive application output data upon receiving the break beginning signal so that upon detecting the beginning of a television commercial break the interactive application output data is automatically presented in the primary display area.

2. The system of claim 1 wherein the break detection module is further adapted to generate a break end signal either automatically upon detecting or determining the end of a television commercial break or manually upon a viewer's election, wherein the switching module switches the primary display image back to the television program signal upon

receiving the break end signal so that the television program signal is presented in the primary display area.

3. The system of claim 1 wherein the television program module is a television receiver, a satellite receiver, a VCR, or an HDD receiver.

4. The system of claim 1 wherein the interactive application program is a video game program, a word processor program, a spreadsheet program, or an internet browser program.

5. The system of claim 1 wherein the input module is a keyboard, mouse, or hand-held controller.

6. The system of claim 2 wherein the interactive application module comprises:

a program memory for storing the interactive application program;

a central processing unit which executes the interactive application program in accordance to the user input commands;

an input command interface for receiving the user input commands from the input module and transferring the user input commands to the central processing unit;

a pause memory for storing a user's point of progress in executing the interactive application program;

a data output means for outputting image and sound data in accordance with the execution of the interactive application program.

7. The system of claim 6 wherein a user's point of progress in executing the interactive application program is automatically stored in the pause memory when the

switching module switches the primary display image to the television program signal, wherein execution of the interactive application program is resumed from the user's stored point of progress in the pause memory when the switching module switches the primary display image back to the interactive application output data.

8. The system of claim 6 wherein the input command interface is an infrared photosensor and the input module is one or more hand held remote controllers which emit infrared signals.

9. The system of claim 6 wherein the program memory is a CD-ROM, magnetic disc, integrated circuit, or hard drive.

10. The system of claim 6 wherein the program memory is a local memory connected to a remote program source that stores a multitude of interactive application programs, wherein the system comprises means to download interactive application programs from the remote program source to the local memory.

11. The system of claim 10 wherein the means to download is connected to the internet.

12. The system of claim 10 wherein the selection and downloading of specific interactive application programs from the remote program source to the internal memory device is controlled by the input commands entered by the user via the input module.

13. The system of claim 1 further comprising means to deactivate the switching module and to manually select either the television program signal or the interactive application output data as the primary display image.

14. The system of claim 1 wherein the display module is a television or a computer monitor having a display screen.

15. The system of claim 14 wherein the primary display area can be the entire display screen of the television or computer monitor or can be an area constituting a majority of the display screen in televisions and computer monitors with picture-in-picture capabilities.

16. The system of claim 1 wherein the display module is a television or computer monitor with picture-in-picture capability having a secondary display area for displaying a secondary display image in addition to the primary display area for presenting the primary display image, wherein the switching module switches the displays of the primary display image and the secondary display image between the television program signal and the interactive application output data so that the television program is presented as the primary display image and the interactive application is displayed as the secondary display image until the beginning of a commercial break is detected, whereupon the detection of the beginning of a commercial break the interactive application output data is presented as the primary display image and the television program signal is displayed as the secondary display image until the end of the commercial break is detected, whereupon the detection of the end of the commercial break the television program signal is presented as the primary display image and the interactive application output data is displayed as the secondary display image.

17. A method of executing an interactive application program during television commercial breaks comprising the steps of:

providing a television program module which generates a television program signal;

providing an interactive application module adapted to receive user input commands and generate output data according to an interactive application program;

providing a break detection module to detect the beginning of television commercial breaks in the television program signal;

presenting the television program in a primary display area of a display module until the beginning of a television commercial break is detected and then displaying the interactive application in the primary display area.

18. The method of claim 17 wherein the break detection module can also detect the end of television commercial breaks and wherein the interactive application is presented in the primary display area until the end of the television commercial break is detected and then presenting the television program in the primary display area.

19. The method of claim 18 wherein the interactive application module comprises:

a program memory for storing the interactive application program;

a central processing unit which executes the interactive application program in accordance to the user input commands;

an input command interface for receiving the user input commands from an input module and transferring the user input commands to the central processing unit;

a pause memory for storing a user's point of progress in executing the interactive application program;

a data output means for outputting image and sound data in accordance with the execution of the interactive application program.

20. The method of claim 19 further comprising the step of automatically storing a user's point of progress in executing the interactive application program in the pause memory when the television program is presented in the primary display area, wherein execution of the interactive application program is resumed from the user's stored point of progress in the pause memory when the interactive application is presented in the primary display area.

21. The method of claim 19 wherein interactive application programs are downloaded to and stored locally in the program memory.

22. The method of claim 17 wherein the display module is a television or computer monitor with picture-in-picture capabilities having a secondary display area in addition to a primary display area, wherein the television program is presented in the primary display area and the interactive application displayed in the secondary display area until a commercial break is detected, whereupon detection of the beginning of a commercial break the interactive application is presented in the primary display area and the television program is displayed in the secondary display area until the end of the commercial break is detected, whereupon detection of the end of the commercial break the television program is presented in the primary display area and the interactive application is displayed in the secondary display area.